

ADDENDUM

PROJECT New Engineering and Science Building – The University of Connecticut
Project No. 901376

NO. Addendum No. 02

DATE April 10, 2015

All items of this addendum become part of the Contract Documents and amend, supplement, modify, change, delete or add to the provisions of the Contract Documents. Where any provision of the Contract Documents is so affected, the unaltered provisions shall remain in effect. Where possible, the provisions of this addendum shall be construed together with and harmonized with the provisions of the Contract Documents, but where the provisions of this addendum cannot be harmonized, the provisions of this addendum take precedence over conflicting provisions articles, paragraphs or subparagraphs in the Contract Documents.

THE PURPOSE OF THIS ADDENDUM IS TO CHANGE THE FOLLOWING ITEMS:

Make changes to scope of work as identified on the following affected specifications and drawings:

CHANGES AND ITEMS INCLUDED PER THIS ADDENDUM:

1. Clarification: Addendum No. 1 was included and inserted into the Bid Documents. See drawing list included in Manual 00 for applicable drawings.
2. Issuance of Specification Section 000940 Bid Package 22.00 – Plumbing Scope of Work
3. Issuance of Specification Section 000940 Bid Package 23.00 – HVAC Scope of Work
4. Revisions to Specification Section 000940 Bid Package 06.00 – General Trades
5. Project Schedule
6. Soil Nail Wall Design Drawings SN-1 thru SN-7 dated January 7, 2015 as prepared by Geo

END OF ADDENDUM No. 2 SUMMARY

New Engineering and Science Building
The University of Connecticut
Addendum No. 2: April 10, 2015

Proj. No. 901376

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Activity ID	Activity Name	Orig Dur	Start	Finish	TF	Gantt Chart (Days)																											
UCConn Engineering & Science Building (03.18.15)						▼ 02-May-17																											
Central Warehouse						▼ 25-Feb-15, Central Warehouse																											
Preconstruction						▼ 25-Feb-15, Preconstruction																											
D1000	DEMOLITION & ABATEMENT DOC'S	176	10-Sep-13 A	07-Apr-14 A																													
D1010	SUB PREQUALIFICATIONS	20	09-Mar-14 A	21-Apr-14 A																													
D1020	PREPARE BID PACKAGES	15	19-Mar-14 A	30-Apr-14 A																													
D1030	BID & AWARD	15	01-May-14 A	15-May-14																													
D1065	FINAL GEOTECH INVESTIGATIONS	141	01-Aug-14 A	19-Dec-14		GEOTECH INVESTIGATIONS																											
D1015	COMPLETE DEEP PERMIT	99	01-Aug-14 A	22-Dec-14		COMPLETE DEEP PERMIT																											
D1070	ISSUE FINAL GEOTECH ENGINEERING	0		19-Dec-14		ISSUE FINAL GEOTECH ENGINEERING																											
D1025	DEEP PERMIT APPROVALS	60	22-Dec-14 A	25-Feb-15	87	DEEP PERMIT APPROVALS																											
Abatement & Demolition																																	
D1035	UCONN UTILITY DISCONNECTS	19	16-May-14 A	12-Jun-14 A																													
D1040	SUBMIT PERMITS & MOBILIZE	15	19-May-14 A	09-Jun-14 A																													
D1050	ABATE / DEMO	34	13-Jun-14 A	31-Jul-14 A																													
D1060	SUBSTANTIAL COMPLETION - DEMO	0		31-Jul-14 A																													
New Building						▼ 08-Feb-17, New Building																											
Preconstruction						▼ 02-Feb-16, Preconstruction																											
Design Documents Phase																																	
B1000	SELECT CM	5	10-Sep-13 A	01-Nov-13																													
B1050	DESIGN DEVELOPMENT	134	01-Oct-13 A	26-Feb-14																													
B1010	25% DD ESTIMATE	20	20-Dec-13 A	22-Jan-14 A																													
B1020	100% DD ESTIMATE	15	27-Feb-14 A	20-Mar-14																													
Construction Documents Phase						▼ 03-Apr-15, Construction Documents Phase																											
B1055	50% CDs	50	28-Feb-14 A	30-Jun-14 A																													
B1030	50% CD Estimate	20	01-Jul-14 A	29-Jul-14 A																													
B1056	UConn Review 50% CDs	28	01-Jul-14 A	08-Aug-14																													
B1670	90% CDs	35	11-Aug-14 A	29-Sep-14																													
B1040	90% CDs Estimate & Reconciliation	15	26-Sep-14 A	16-Oct-14 A		Reconciliation																											
B1045	UConn Review & Approval CDs	15	17-Oct-14 A	06-Nov-14		& Approval CDs																											
B1065	Design Team Finalize From Review Comments	30	07-Nov-14 A	22-Dec-14		Design Team Finalize From Review Comments																											
B1675	Complete Lab Redesign	15	22-Dec-14 A	20-Feb-15	0	Complete Lab Redesign																											
B1060	CDs Issued	0		20-Feb-15	0	CDs Issued																											
B1075	Drawing Revision	30	23-Feb-15	03-Apr-15	0	Drawing Revision																											
Bid & Award						▼ 28-Jul-15, Bid & Award																											
B1070	Sub Prequalification	38	10-Nov-14 A	20-Feb-15	0	Sub Prequalification																											
B1025	Finalize Earth Retention Engineered Design	10	22-Dec-14 A	09-Jan-15 A		Finalize Earth Retention Engineered Design																											
B1035	Review & Approve Earth Retention Design	5	12-Jan-15 A	23-Jan-15 A		Review & Approve Earth Retention Design																											
B2075	Prepare Bid Packages - Phase 2	20	23-Mar-15	17-Apr-15	0	Prepare Bid Packages - Phase 2																											
B2080	Subcontractor Bidding - Phase 2	30	06-Apr-15	15-May-15	0	Subcontractor Bidding - Phase 2																											
B2086	Descope - Phase 2	20	18-May-15	15-Jun-15	0	Descope - Phase 2																											
B2085	Develop GMP - Phase 2	10	02-Jun-15	15-Jun-15	10	Develop GMP - Phase 2																											
B2090	UConn Execute GMP - Phase 2	10	16-Jun-15	29-Jun-15	0	UConn Execute GMP - Phase 2																											
B2091	Issue Subcontracts - Phase 2	20	30-Jun-15	28-Jul-15	15	Issue Subcontracts - Phase 2																											
Procurement						▼ 02-Feb-16, Procurement																											
MP1291	MEP Coordination	60	30-Jun-15	23-Sep-15	84	MEP Coordination																											
MP1014	Prep/Submit Concrete Rebar Submittals	10	29-Jul-15	11-Aug-15	15	Prep/Submit Concrete Rebar Submittals																											
MP1003	Prep/Submit Site Drainage Submittals	15	29-Jul-15	18-Aug-15	331	Prep/Submit Site Drainage Submittals																											

Start: 10-Sep-13
 Finish: 02-May-17
 Data Date: 16-Feb-15
 Run Date: 24-Mar-15
 UCONN-ESB-02A

Fusco Corporation
UCConn Engineering Science Building (03.18.15)
Project Construction Schedule

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- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone
- ▼ Summary

EXHIBIT “B”
SCOPE OF WORK
New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No.23.0 HVAC

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **HVAC** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **HVAC** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE #22.0 – Plumbing & HVAC:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Plumbing & HVAC** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated “(As Applicable)”. In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

SECTION

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training
018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES SECTION

064023 Architectural Woodwork

DIVISION 7 - THERMAL AND MOISTURE PROTECTION SECTION

079200 Joint Sealers

DIVISION 8 - OPENINGS SECTION

089000 Louvers and Vents (As Applicable)

DIVISION 11 - EQUIPMENT SECTION

116200 Laboratory Equipment (As Applicable)

DIVISION 13 - SPECIAL CONSTRUCTION SECTION

132100 Laboratory Environmental Rooms (As Applicable)

DIVISION 14 - CONVEYING EQUIPMENT

142100 Traction Elevators (As Applicable)

TABLE OF CONTENTS – VOLUME 2

DIVISION 21 - FIRE SUPPRESSION (As

Applicable)

DIVISION 22 – PLUMBING (As Applicable)

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING

230500	BASIC MECHANICAL MATERIALS AND METHODS
230510	3D BUILDING INFORMATION MODELING
230513	MOTORS AND CONTROLLERS
230514	VARIABLE FREQUENCY DRIVES
230516	PIPE EXPANSION
230519.10	METERS
230519.20	HYDRONIC PIPING SPECIALTIES
230523	HVAC VALVES AND STRAINERS
230529	HANGERS AND SUPPORTS
230533	ELECTRIC HEAT TRACE
230548	MECHANICAL VIBRATION CONTROLS & SEISMIC RESTRAINTS
230553	MECHANICAL IDENTIFICATION
230584	TROUGH-PENETRATION FIRESTOP SYSTEMS
230593	TESTING, ADJUSTING AND BALANCING
230713	DUCT INSULATION
230716	EQUIPMENT INSULATION
230719	HVAC PIPING INSULATION
232000	HVAC PIPING AND JOINTS
232113.13	HVAC UNDERGROUND PIPING
232123	HVAC HYDRONIC PUMPS AND ACCESSORIES
232223	STEAM AND CONDENSATE SPECIALTIES
232500	CHEMICAL WATER TREATMENT
233100	SHETTMETAL WORK AND ACCESSORIES
233319	SOUND ATTENUATORS
233600	AIR TERMINAL BOXES
233620	LABORATORY SYSTEM
233700	REGISTERS, GRILLES AND DIFFUSERS
233723	ROOF ACCESSORIES

233900	FANS AND ACCESSORIES
234100	FILTERS
235700	HEAT EXCHANGERS
236415	AIR COOLED WATER CHILLERS
236500	COOLING TOWERS
237323	FACTORY BUILT-UP AIR HANDLING UNITS
238216	COILS
238235	TERMINAL HEAT TRANSFER UNITS
238900	STEAM HUMIDIFIERS
239000	HVAC SPECIALTIES

DIVISION25 – INTERGRATED AUTOMATION

250500	BASIC MATERIALS AND METHODS
250630	SCHEDULES
251000	DIRECT DIGITAL/AUTOMATIC TEMPERATURE CONTROLS
253523	DDC CFM TRACKING TERMINAL BOXES (VAV, VCV, CV, VVE, CVE DESIGNATIONS)
255000	INSTRUMENTATION TERMINAL DEVICES
259000	SEQUENCE OF OPERATIONS

DIVISION 26 – ELECTRICAL As Applicable)

DIVISION 27 – COMMUNICATIONS TABLE OF CONTENTS (As Applicable)

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

281000	Security Systems (As Applicable)
283110	Fire Alarm System (As Applicable)

APPENDICES

Appendix 1
REPORT ON GEOTECHNICAL ENGINEERING ASESMENT AND PRELIMINARY
ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL
ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED
SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Electrical Connections for Equipment:

- a. The Electrical Contractor shall provide single source line voltage to all equipment provided within this project for all trades unless specifically noted otherwise.
- b. Starters, variable frequency drives (VFDs), Disconnects Low Voltage and Control Wiring including control voltage transformers shall be provided by the HVAC

Contractor for all of your equipment, unless specifically noted to be provided by the Electrical Contractor.

- c. The Electrical Contractor shall provide line voltage to only those the Temperature Control Panels indicated or shown on the Contract Documents.
- d. Failure to notify the Fusco Corporation of any discrepancies shall be construed as acceptance of the condition.

3) Seismic Bracing:

- a. This Subcontractor shall furnish and install all seismic bracing as required and indicated in the Contract Documents including stamped calculations by a State of Connecticut licensed engineer.
- b. This Subcontractor shall furnish and install all flexible joint assemblies associated with any mechanical restraint collars as indicated in the Contract Documents.

4) Temporary and Permanent Heating and Cooling:

- a. The Plumbing and HVAC Contractor shall utilize both the Permanent Cooling and Heating Equipment for Temporary Cooling and Heating subject to the approval of the Construction Manager, in its sole discretion. Subcontractor to provide all temporary heating and cooling as required and specified below.
- b. The Plumbing and HVAC Contractor shall provide Cooling / Humidity Control with **New Permanent Heating System** during the winter of 2016/2017. Sufficient temperature for temporary cooling shall be a maximum ambient temperature of 65 degrees Fahrenheit and a maximum relative humidity of 50 percent.
- c. New mechanical systems may be employed to provide temporary heat during construction and occupancy of this project when feasible. Subcontractor shall be responsible to supply temporary or permanent power to these systems at each phase of the project as required. It will be the responsibility of this subcontractor to ensure that its equipment is properly maintained and protected while these systems are being utilized. Subcontractor shall carry all costs for an extended warrantee until final acceptance by owner for all equipment and systems employed to support these heating systems.
- d. The Plumbing and HVAC Contractor shall provide **all temporary control wiring** for its temporary heating and cooling systems. At a minimum, thermostat controls shall be provided in a quantity (one per floor per unit) and location (remote from Units), as approved by the Construction Manager, to accommodate an evenly distribution of temporary heating and cooling.

- e. All necessary Equipment, Temperature Controls, Piping, Safety Controls that may be required shall be installed and operational prior to requesting approval to utilize the permanent heating or cooling system.
- f. The Plumbing and HVAC Contractor shall provide **temporary filters at all return ducts as required** and at the sole discretion of the Construction Manager, changed at weekly intervals, so as not to allow the migration of construction dirt and dust. Additionally Duct detectors shall be protected.
- g. **Power Consumption** cost (**Usage Only**) to operate the Permanent Cooling System shall be by others.
- h. **Fuel Consumption** cost (**Usage Only**) to operate the Temporary and Permanent Heating System shall be by others.
- i. The Plumbing and HVAC Contractor shall take adequate precautions to prevent any Damage from occurring to the Permanent Heating and Cooling Equipment while providing Temporary Heating.
- j. All system filters for liquid or air shall be routinely replaced as required by maintenance intervals, written in the O & M Manuals.
- k. All permanent HVAC Systems and Components utilized for Temporary Heating shall be **completely serviced, vacuumed, cleaned and turned over in "As New" condition** prior to acceptance by Owner.
- l. All HVAC Equipment and Filters used for Temporary Cooling shall have the **Warranties and Guarantees Extended** so that their full term as specified is available to the Owner from the date of Substantial Completion of each Phase as required by the Contract Documents.
- m. The Electrical Contractor shall provide all power wiring necessary to accommodate the above Temporary and Permanent Heating and Cooling requirements.

5) Fire Alarm Systems:

The Plumbing and HVAC Contractor shall provide any and all coordination that may be required with the Electrical Contractor as it relates to the Fire Alarm System. This shall include but not be limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests and etc as indicated on the Contract Documents

It is the intent of the Contract Documents that the Fire Alarm System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided. Duct

Smoke Detectors will be furnished by the Electrical Contractor for Installation by this Contractor.

6) Underground Ducts and Utilities

The Site Contractor and/or Utility Company shall provide water, storm and sanitary service from point of origin to within 5' of the building line. The Site Contractor shall also provide Trenching, Bedding, Backfilling, Concrete Anchors, Thrust Blocks and Encasement as required for your work and the work of other trades.

The HVAC Contractor shall be responsible for connections to each service within your Scope of Work provided by the Site Contractor and/or Utility Co. to complete the installation. Inserts, sleeve and the like required to enter/penetrate Foundation Wall and/or slabs shall be provided and sealed/Waterproofed by the HVAC Contractor.

7) Service Connections:

The HVAC Contractor shall be responsible for all final connections, including, shut off valves, disconnects and etc. for all Equipment, (furnished by others) as it relates to your scope of work, including but not limited to: Casework, Lab Equipment and Casework, Fume Hoods, Walk in Coolers, Owner Supplied Equipment, and etc.

The HVAC Contractor shall coordinate with the appropriated Contractor to assure that all services are complete in all respects. Failure to notify the Construction Manager of any discrepancies shall be construed as acceptance of the connection locations.

The HVAC and Electrical Contractors shall each be responsible for final connections and control wiring as required for equipment and as noted on the Contract Documents.

8) Equipment:

The Electrical Contractor shall provide line voltage to all equipment provided within this project for all trades unless specifically noted otherwise. Starters and disconnects shall be provided by the Contractor that is providing the motorized equipment unless specifically noted to be provided by others.

The HVAC Contractor will coordinate and shall furnish all starters and disconnects switches for all HVAC, and ATC equipment and as specified and scheduled on the Plumbing and HVAC Drawings. Installation of such will be by the Electrical Contractor.

9) Balancing Systems:

The HVAC Balancing Subcontractor shall provide extended service on balancing for one-hundred and eighty (180) days beyond full building occupancy during which time

any resetting, readjusting or rebalancing shall be performed to any terminal, fan or zone to correct comfort conditions or to confirm information submitted in the balancing report. The Balancing Contractor shall provide technicians as needed to assist the mechanical engineers in making any test that he or she may require during this time.

The HVAC balancing Contractor must have at least three years experience in testing, adjusting and balancing (TAB) procedures for equivalent sized projects. The personnel conducting the air system TAB must be certified by Associated Air Balancing Council (AABC). All instruments must have documented calibration traceable to the bureau of standards.

10) Ductwork and Terminal Air Equipment:

The HVAC Contractor shall cover all open ends of ductwork and terminal air equipment with air tight seals on a daily basis and shall be maintained until such time as the system is completed and the Construction Manager and the Mechanical Engineer indicates that these seals can be removed. This includes from when the material is delivered to the site to final installation. This Contractor is required to perform air leakage testing per SMACNA requirements and/or per the contract document. If air seals are broken prior to installation, the Construction Manager may require the piece to be HAND Cleaned, resealed, retested.

As indicated in the Project Specification, the Mechanical Trade Contractor shall be responsible for **Cleaning ALL of the Ductwork and HVAC Units** before the Phase and the Project is turned over to the Owner.

11) Louvers and Grilles

Only “Architectural Louvers” shall be provided by the General Trades Contractor. All other louvers, grills and the like shall be the responsibility of the Plumbing and HVAC Contractor.

The Plumbing and HVAC Contractor shall be responsible for all final connections to the Architectural Louvers provided by the General Trades Contractor.

12) Condensate Piping

The HVAC Contractor is responsible for **ALL** condensate drain piping (including insulation) and related pumps and accessories.

13) Ductwork and Pipe Testing

The HVAC Contractor shall include all cost associated with duct work and pipe leakage testing, balancing, hydrostatic testing, flushing to industry cleanliness specifications, and chemical pretreatment and all other industry standard testing related to this bid package.

14) Building Management System

Furnish and install the complete building management controls system for the mechanical systems.

15) Heat Trace:

The Mechanical Contractor will furnish and install all electric heat trace cable systems indicated on the Contract Documents and the Electrical Contractor will provide all of the power wiring to these heating cables.

16) Commissioning and Training:

Engage factory-authorized service representatives to perform startup services and to demonstrate and train Owner's maintenance personnel as described in the Project manual and as specified below.

- a.) Coordinate food equipment startup with service-utility testing, balancing, and adjustments. Do not operate steam lines before they have been cleaned and sanitized.
- b.) Remove protective coverings and clean and sanitize equipment, both inside and out, and relamp equipment with integral lighting. Where applicable, comply with manufacturer's written cleaning instructions when final cleaning.
- c.) Test each equipment item for proper operation. Repair or replace equipment that is defective in operation, including units that operate below required capacity or that operate with excessive noise or vibration.
- d.) Test refrigeration equipment's ability to maintain specified operating temperature under heavy-use conditions. Repair or replace equipment that does not maintain specified operating temperature.
- e.) Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- f.) Test motors and rotating equipment for proper rotation and lubricate moving parts according to manufacturer's written instructions.
- g.) Test water, drain, gas, steam, oil, refrigerant, and liquid-carrying components for leaks. Repair or replace leaking components.
- h.) Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance for each food service equipment item.
- i.) Review data contained in the operation and maintenance manuals. Schedule training with Owner, through Architect, with at least 7 days' advance notice.

17) Access Doors:

The HVAC Contractor shall provide access doors to the General Trades Contractor for installation. The access door provided shall be of compatible use for the finish assemble. Sizing shall be suitable to meet required access code.

18) BIM Modeling Coordination Drawings:

- a. This Subcontractor shall **take the lead, become the primary “Gate Keeper”**, provide BIM Modeling for the MEP Coordination Drawings and attend weekly coordination drawings.

CLARIFICATIONS

1. This Bidder may elect to submit a Bid Proposal combining Bid Packages 22.0 and 23.0 if the amount of the Bid Proposal offers a cost reduction. This combined Bid Packages “Offer” will be valid only if the Bidder submits an individual offer for each package involved. Bidders may offer this combined package proposal by submitting it on his or her business letterhead, as an added page to each Bid Form.

EXCLUSIONS

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price Allowances as listed below. Allowances shall include all necessary material, cost for delivery, installation, machinery, insurance, and applicable taxes.

Allowances shall appear as a line item on the Contractor’s Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

**EXHIBIT “B”
Scope of Work**

**New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376**

Bid Package No. 6.0-General Trades

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not limited to labor, materials, equipment and all incidental work associated with **General Trades** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **General Trades** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation and scope to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest value shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE No. 6.0- General Trades:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish, install and complete the **General Trades** and related work as described in the Specifications, Drawings, Existing Site Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all **Division One Specification Sections** and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESMENT AND
PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM –
AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND
GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

Specification Sections of the Project Manual:

DIVISION 1 - GENERAL REQUIREMENTS

SECTION

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls

01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
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019113	Building Commissioning Requirements

DIVISION 5 – METALS

054000 Cold Formed Metal Framing

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES SECTION

062000 Carpentry

DIVISION 7 - THERMAL AND MOISTURE PROTECTION SECTION

072100 Thermal Insulation (As Applicable)
078413 Firestops and Smoke seals
079200 Joint Sealers

DIVISION 8 - OPENINGS

081000 Door Schedule (As Applicable)
081113 Steel Doors and Frames (As Applicable)
081119 Stainless Steel Doors and Frames (As Applicable)
081433 Stile and Rail Wood Doors (As Applicable)
083113 Access Doors (As Applicable)
087100 Finish Hardware (As Applicable)
089000 Louvers and Vents

DIVISION 9 – FINISHES

092713 Glass-Reinforced Gypsum Fabrications
092900 Gypsum Drywall

DIVISION 10 – SPECIALTIES

101100 Visual Display Surfaces
104416 Fire Extinguishers and Cabinets

DIVISION 12 – FURNISHINGS

125100 Laboratory Darkroom Curtains

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DIVISION 21 - FIRE SUPPRESSION

210584 THROUGH-PENETRATION FIRESTOP SYSTEMS

DIVISION 22 - PLUMBING

220584 THROUGH-PENETRATION FIRESTOP SYSTEMS

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING

230584 TROUGH-PENETRATION FIRESTOP SYSTEMS

DIVISION 26 – ELECTRICAL

260584 THROUGH PENETRATION FIRESTOP SYSTEMS

APPENDICES

Appendix 1

REPORT ON GEOTECHNICAL ENGINEERING ASESSMENT AND
PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM –
AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND
GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19
DECEMBER, 2014

Appendix 2

REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER,
2014
REVISED FEBRUARY 2015

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Miscellaneous Carpentry; Cold Formed Metal Framing; Framing Accessories; Gypsum Sheathing; Glass-Fiber Blanket Insulation; Gypsum Board; Glass-Matt Water-Resistant Board; Gypsum Board Accessories; Gypsum Board Shaft Walls; Gypsum Board Assemblies; Drywall Partitions; Cementitious Backer Board as Tile Substrate; Drywall Ceiling and Soffits and other Gypsum and Light Gage Framing; Non-Structural Metal Framing; Wood Framing; Wood Wall Base; Rough Carpentry; Safety (O.S.H.A. Protection); Blocking; Furring, Grounds; Backboards; Acoustical and other Sealants/Caulking; Fire-Resistive Joint System; Firestopping; Joint Sealants; Steel Doors and Frames; Flush Wood Doors; Access Doors and Frames;

Door Hardware; Acoustical Ceilings; Signage; Toilet Compartments; Toilet and Bath Accessories; Fire-Protection Cabinets; Fire Extinguishers; Metal Lockers; Projection Screens; Selective Structure Demolition; DAFS Systems; Visual Display Boards; Photo Luminescent Exit Path Marking; Final Cleaning; Temporary Work; Coordination with project schedule and other trades; Submittals, Samples, Product Data;

Fire Stopping Systems; Smoke Sealing Systems; Fire Stopping and/or Smoke Sealing at top of Concrete Walls; Fire Stopping and/or Smoke Sealing at the top of Masonry Walls; Fire Stopping and/or Smoke Sealing at top of Gypsum wall assemblies; Fire Stopping and/or Smoke Sealing for ALL Mechanical, Plumbing, Electrical, Security System, Fire Alarm, Communications, and Fire Protection Sub-contractors and their Sub-subcontractors; Coordination with the project schedule and other Trades; Submittals and Samples; Shop Drawings; Product Data as described in the Contract Documents.

3) Construction Manager's Trailer

- i. Construction Manager's Office Trailer: Provide and eventually remove a pressured treated wood deck and shed roof (watertight) for the entrances to Fusco Corporation's jobsite trailer – approx. (1) 8'x12' size deck with stairs/rails built to all applicable codes and as directed by the CM. Provide two base cabinets and two wall cabinets and countertop to fill twelve foot long space in (1) locations. Provide 50 linear feet of 5/4" x 12" clear number 1 pine shelving with the necessary brackets to hold heavy loads. Eventually remove and dispose of the above installed items.

This Subcontractor shall include transportation from the Construction Managers warehouse/office in New Haven to the Project Site and transportation at the end of the project with a rack body truck (provided by this Contractor) to bring, furniture and incidentals to and from the site. Include **two (2) laborers** to move carry and distribute these incidentals.

4) Thermal Insulation:

- a. The General Trades Contractor shall furnish and install Building Insulation as required to complete its Scope of Work as noted on the Contract Documents.

5) Sheet Metal and Fabric Flashings

The Roofing Contractor shall furnish and install all Sheet Metal Flashings, Metal Copings, Trim and Roof Accessories as described in the Contract Documents and furnish all exposed Metal through Wall Flashings, including metal reglets for installation by the Mason Contractor.

- a. Any concealed and exposed (partially into **NEW** masonry) flashings and any metal flashing requiring a fabricated bend shall be supplied by the Roofing Contractor and installed by the Masonry Contractor at Cavity Walls, Unit Masonry Steel Lintels, Relieving Angle and other areas in contact with Masonry as indicated on the Contract Documents.
- b. The Roofing Contractor shall furnish and install all Prefinished ZINC Cap, ZINC Fascia and/or Prefinished Aluminum Flashings, Counter Flashings, Copings, Metal Gravel Stops and other Sheet Metal contiguous with the Roofing system.
- c. The Roofing Contractor shall furnish to the Masonry Contractor, for installation into the Mason's **NEW** work, all other Metal Flashing and Metal Thru Wall Flashings as noted in the Contract Documents.
- d. Membrane Flashings contiguous to the Mason's work shall be provided and installed by the Mason Contractor.
- e. The Windows, Glazing and Storefronts Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.

- f. The Roofing Contractor shall provide all flashings and reglets and accessories into existing masonry as noted on the Contract Documents. This shall include cutting and patching of all reglets into existing masonry necessary to provide a complete system.
- g. The Roofing Contractor shall supply to the Masonry Contractor all flashings and reglets and accessories into new masonry and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Masonry Contractor.
- h. The Roofing Contractor shall supply to the Window Contractor all flashings and reglets and accessories into Window System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Window Contractor.
- i. The Roofing Contractor shall supply to the General Trades Contractor all flashings and reglets and accessories into DAFS System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the General Contractor.
- j. All metal drip flashings shall be furnished by the Roofing Contractor and installed by the Masonry Contractor.

6) Layout/Survey:

The General Trades Contractor shall provide layout/surveys for his or her own Scope of Work.

The General Trades Contractor shall provide Horizontal and Vertical Control Lines. This information shall be provided by a Connecticut Licensed Land Surveyor who shall install permanent offset points (Maximum of 30 feet) and bench marks that will allow for the reproduction of lines and grades by other Trades. This Contractor shall include per floor the following: eight control lines and benchmarks at every third exterior column and benchmarks at twenty five percent of the interior columns.

The General Trades Contractor shall provide the final survey (A2) by a surveyor licensed by the State of Connecticut.

7) Perimeter Cable Protection:

The Structural Steel Contractor shall install and maintain OSHA-compliant perimeter protection cables and supporting steel at all decks, where required by OSHA. Removal of perimeter cable protection and supporting steel at all levels (except the roof) shall be by the General Trades Contractor. Removal of perimeter cables at the roof shall be by the Roofing Contractor.

8) Seismic Framing at Top of Partitions:

This Subcontractor shall provide seismic framing and kickers at top of wall typical and as noted on the Contract Documents.

9) Light Gage Framing, Gypsum Partitions and Gypsum Ceilings

The General Trades Contractor shall furnish and install Exterior Metal Stud Framing, Gyp Board Sheathing, and/or 3/4" Pressure Treated Plywood, Batt and/or Semi-Rigid Insulation, Clips, firestopping and any and all accessories required to complete the substrate for all Trades as noted on the Contract Documents.

The General Trade Contractor shall furnish and install *all* interior and exterior wood blocking, including but not limited to, general wood blocking, all roofing blocking and nailers required to form Fascias, Parapets, Rakes, Expansion Joints, etc., as shown on the drawings. This includes furnishing and installing any required anchors, bolts, screws, nails, anchor bolts. Etc. This Contractor is responsible via any approved method to furnish and install anchors for attaching wood to metal or concrete masonry units. Additionally, this Contractor shall furnish to the Masonry Contractor any Anchor Bolts that will be installed in Masonry units for the purpose of anchoring any wood products.

Additionally the General Trades Contractor shall furnish and install all Drywall Partitions, Insulation, Clips and/or accessories as required to complete Drywall Partitions types as noted on the Contract Documents including, Smoke, Fire, Acoustical and other Sealant and Safing as noted. Fire Safing at Metal Deck/Steel intersection shall be completed by the Drywall and General Trade Contractor. Neoprene Gasket between Drywall Partitions and Exterior Wall Systems shall be provided by the General Trades Contractor.

10) Snow, Ice and Water Removal

The General Trades Contractor shall be responsible for all snow, ice and water removal from **Interior of the Building** and staging provided by the General Trades Contractor and as directed by the Construction Manager for the duration of the Project. Snow, ice and water removal shall be required on a daily basis as directed by the Construction Manager at its sole discretion. This Contractor shall be responsible to provide whatever means necessary to remove snow, ice and water from the interior of the building including but not limited to pumping, piping and vacuuming.

11) Sound Attenuation at Mechanical Curbs:

The General Trades Contractor shall furnish and install all materials and equipment to construct Sound Attenuation Assemblies. This includes, but is not limited to, any framing, sheetrock, insulation, etc.

12) Hollow Metal Doors, Hollow Metal Door Frames:

The General Trade Contractor shall , receive, Handle, Distribute, Set, Protect, Install and Adjust *all* Steel/Hollow Metal Doors, Borrowed Lights, Vision Panels, Hardware, including access doors, including access doors furnished by others. Hollow metal frames contained within Masonry Partitions and Concrete Partitions (if required-openings/forming by Concrete Contractor) shall be set and plumbed by the General Trades Contractor who will work with the Mason/Concrete Contractor to ensure that the frames are blocked with CMU's and grouted properly.

The General Trades Contractor shall make provisions to protect Hollow Metal Frames and Hardware mounting holes, installed by the General Trade Contractor, from damage during grouting operations performed by the Masonry Contractor.

- a. The General Trades Contractor shall make provisions to protect Hollow Metal Frames and Hardware mounting holes, installed by the General Trades Contractor, from damage during grouting operations.
- b. The General Trades Contractor shall prepare all frames to accept all hardware and technology.

13) Sound Control Doors:

The General Trade Contractor shall, Receive, Handle, Distribute, Set, Install Adjust and Protect Sound Control Doors.

14) Finish Hardware, Weatherstripping:

The General Trade Contractor shall Provide, set, install, adjust and protect all Finish Hardware for your Scope of Work.

Additionally the General Trade Contractor shall also be responsible for the following:

- a.) Complete coordination between all hardware, doors, and frames
- b.) Install all doors, wood and hollow metal, pre-machined and pre-fit for glass lites, louvers, hardware, etc.
- c.) Wood doors shall be factory pre-finished as specified
- d.) Install all door louvers
- e.) Install all electrified hardware for your Scope or Work including but not limited to electric locks, electric strikes, key cards, transformers and any and all necessary accessories as noted on the Contract Documents.
- f.) Install lockable metal heavy duty key cabinet. This Contractor will meet with the Owner to set up the cabinet in an initial meeting and then turnover the key cabinet at a follow-up meeting.
- g.) Provide and later remove at the direction of the Construction Manager all temporary construction cores to the Construction Manager.
- h.) This Contractor shall install all construction cores and permanent cores in each lockset. The Owner will not be doing ANY of this work.

- i.) This Contractor is responsible for coordinating the Master Key System with the owner including as many meetings as necessary to accomplish this coordination.
- j.) This Contractor will return to the Project (6) months after the date of Substantial Completion to examine, re-adjust, consult, replace hardware items, and prepare a detailed written report to the Owner.
- k.) This Contractor shall install the magnetic door hold open contact plate (furnished by the Electrical Contractor) on it doors as noted on the Contract Documents.
- l.) This Subcontractor shall coordinate the Hollow Metal Frames and Doors to receive the Electrical Contractor's Door Contacts (contacts installed by Electrical Contractor).
- m.) Subcontractor is responsible for all shims, sealants and/or backer rods required for door frame installation.
- n.) Install door opening assemblies including associated exit devices, closers, and gaskets complete.
- o.) Include unloading, inventorying, storing, protection, distribution, and installation of all doors, frames and finish hardware. General Trades Subcontractor is responsible for any theft, damage, or other loss to items once items are delivered to the project site.
- p.) Include all adjusting and balancing of doors for proper operation. Include the adjusting and balancing of doors and closers and comply with all applicable codes. Subcontractor shall perform the adjusting and balancing when directed by the Construction Manager in writing to minimize repeat visits and shall submit a report identifying any doors or closers that are not balanced as specified and the reason why.
- q.) Install thresholds, seals, smoke seals, fasteners, door stops, door hold-opens, finish hardware, kickplates, gasketing and weather stripping, sweeps, astragals and door silencers complete.

15) Wood Blocking

- a. The General Trades Contractor shall coordinate the Blocking requirements for the Work of the Window, Glazing and Storefront Trades Contractor.
- b. Any Blocking indicated on the Contract Documents or as required by the window and storefront manufacturer and the Window, Glazing and Storefront Contractor shall be furnished and installed by the General Trades Contractor.
- c. The blocking coordination responsibility amongst this Contractor and General Trades Contractor shall be ongoing for the duration of the project.
- d. The Window, Glazing and Storefront Contractor shall provide all Clip Angles, Steel Angles, Furring Channels, Miscellaneous Metal Framing and Shims to complete installation of the Windows and Storefronts before and after the General Trades Contractor has provided coordinated Blocking.

The General Trade Contractor shall furnish and install ALL WOOD BLOCKING required by the Contract Documents. Wood Blocking shall include, but not be limited to, plywood blocking, furring, dimensional lumber and any and all wood required by the contract documents indicated for the purpose of blocking for any and all trades. The General Trades Contractor shall prepare a blocking location plan and conduct all required meetings in the presence of the Construction Manager. The blocking location plan shall be signed off by all trades requiring blocking (including the Architect for FF&E).

16) Backboards:

The General Trade Contractor shall provide all Electrical/Mechanical/Communication Backboards and as described in the Specification and as shown on the Contract Drawings. This Contractor shall provide thirty (30) additional four foot x eight foot ¾” plywood backboards in addition to what is required by the Contract Documents.

17) Architectural Louvers, Grilles and Vents

This Contractor shall provide and install **ALL** Architectural Louvers/Grilles/Vents.

- a. The General Trades Contractor shall provide “Architectural Louvers” only. This includes all louvers shown on the architectural drawings.
- b. All other louvers, grilles and the like shall be the responsibility of the Mechanical Contractor.
- c. The Mechanical Contractor shall be responsible for all final connections to the Architectural Louvers provided by others.

18) Substrates:

The General Trade Contractor shall prepare drywall substrate so that they meet or exceed the requirements of the specification for the final finishes. The Substrate shall meet or exceed flatness, Levelness and/or surface texture required.

19) Inspections:

The General Trade Contractor shall be responsible for properly coordinating and scheduling all inspections including but not limited to framing, insulation and other inspection that may be required in the execution of his or her Scope of work by the Authority having Jurisdiction.

20) Expansion Joints:

The General Trade Contractor shall furnish and install all **interior and exterior** floor, wall and ceiling expansion joint assemblies as shown on the contract documents.

21) Saddles, Thresholds and Sills:

The General Trades Contractor shall provide all saddles, thresholds and sills that is a component of your assembly.

22) Proper Manpower Management:

The General Trades Contractor shall have figured in their bid price multiple crews to perform the work of this bid package but not limited to; work both interior and exterior framing simultaneously in addition to separate crews for other work such as, but not limited to; installing gypsum, interior/exterior wall panels, taping and ceiling installation to meet the project schedule.

23) Stair Erection:

The General Trades Contractor shall provide temporary wood fillers all stairs treads immediately after the Structural Steel Contractor erects the stairs simultaneously with structural steel erection.

24) Temporary Entrance Doors and Exterior Openings:

At **ALL** exterior aluminum door locations the General Trades Contractor shall include in its bid proposal the cost to provide and eventually remove and dispose of temporary 1 3/4" wood doors with heavy duty locks and keys, all other necessary hardware, partitions walls at these locations only, and LCN or equal closers. Removal shall be at the direction of the Construction Manager with close coordination of quantity and areas with the Aluminum Windows and Storefront Contractor.

The General Trade Contractor shall include in its bid proposal the cost to provide and eventually remove and dispose from **ALL** exterior openings the temporary plywood protection and wood frames. Removal shall be at the direction of the Construction Manager with close coordination of quantity and areas with the Aluminum Windows and Storefront Contractor.

The General Trades Contractor shall be responsible for security of the building and maintaining and eventually removing **ALL** temporary doors, chains, locks, etc.

The General Trades Contractor shall be responsible on a *daily basis* to secure all access points to the building at the direction of the Construction Manager (after the Structure Demolition and Abatement Contractor has been relieved of this responsibility).

This Contractor shall provide and maintain and eventually remove One (1) Plywood Window (at upper level) with functioning hinges and hasp lock for access of temporary works into the building by others and for general access to load the upper floors as work progresses.

25) Temporary Heating and Cooling:

The General Trades Contractor shall and provide fire-rated temporary protection (including but not limited to, cut specifically for ductwork and fit tightly in the opening as prescribed by the Unit Manufacturer) to the door and window temporary protection necessary, in the sole discretion of the Construction Manager, to accommodate the Temporary Heating and Cooling systems as described in Bid Package #23.01.

The General Trades Contractor shall provide, maintain, relocate and eventually remove sixteen (16) temporary heat barriers constructed of 2x4 fire-retardant wood framing secured to the structure lined with six (6) mil fire-retardant plastic at a height and width of a typical hallway (10' x 12').

The patching of holes in partitions is to be done by the General Trades Contractor for drywall and the Masonry Contractor for masonry.

26) Temporary Power:

The patching of holes in partitions made for Temporary Power shall be provided by the General Trades Contractor for drywall and the Masonry Contractor for masonry

27) Construction Ventilation:

The General Trades Contractor shall be responsible for providing Six (6) Five Foot (5') diameter hi-speed, heavy duty portable fans for the duration of the Project. This includes setting up, locating, moving as needed, plugging or wiring as needed and maintaining at all times during this duration.

28) Architectural Joint Systems:

The General Trade Contractor shall furnish and install all Architectural Joint Systems Assemblies and expansion joints that are to be incorporated into this Scope of Work.

29) Man Lifts:

The General Trades Contractor shall allow use of man lifts by the Construction Manager or other for inspection purposes and or as directed by the Construction Manager. Provide training and any necessary safety equipment.

30) Fire Extinguishers and Cabinets:

The General Trades Contractor shall provide all Fire Extinguisher Cabinets and Permanent Fire Extinguishers as noted on the Contract Documents.

31) Pest Management

- a. This Subcontractor shall provide pest management services for the entire duration of the Work. Pest control methods should first strive to use non-chemical controls such as trapping and pest proofing, followed by chemical controls only if non-chemicals methods fail.
- b. This Subcontractor will control structural pests to include:
 1. Insects and other arthropods: These include ants, cockroaches, yellow jackets and other wasps and bees, and any other arthropod pest not excluded.
 2. Mice and rats: The contractor shall adequately suppress rats and mice found inside and outside buildings. Pick-up and proper disposal of dead vertebrates is also included in this scope of work.
 3. Pests excluded from contract: Termites and other wood destroying organisms.

32) Minor Work Provisions

The General Trades Contractor shall include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents as it relates to the Fire Stopping and Smoke Sealing. **However, in addition, this Subcontractor shall include a \$10,000 allowance for additional Fire Stopping and Smoke Sealing that is not defined, described, inferred or discernable within the Contract Documents. This additional minor work that is not indicated on the Contract Documents shall be performed as directed by the Construction Manager and shall be in addition to all other work indicated in this scope.**

CLARIFICATIONS

- a.) The General Trades Contractor shall:
 - 1) Provide fire stopping at all slab of deck edges as called for on the contract documents.
 - 2) Provide cold formed metal framing indicated on structural and architectural drawings.
 - 3) Provide all spray foam building insulation.
 - 4) Provide mineral wool insulation at exterior walls.
 - 5) Furnish and install all architectural louvers including adjacent steel support angles, blocking, fasteners, and clip angles including but not limited to as indicated in detail 6/A6.30 and 4/A6.31 and other details.
 - 6) Include all projector mounts. Include projector mount shown on detail 3/A8.08.
 - 7) Install all door hardware as it relates to doors in this scope of work. Include all door openers, hardware wiring, programing, adjustments, etcetera for a complete system. Include all wiring in the door frames and doors and to the activation buttons. Coordinate with Electrical Contractor and Telecommunications Contractor.

- 8) Include the unloading, storage and installation of the 2 hour rated glazing system that is framed with welded hollow metal.
- 9) Construction Parking & Material Storage Location: There is no Contractor parking on site and limited material storage. This Contractor shall include in his/her price offsite parking and storage of bulk material off site should you deem necessary.
- 10) In reference to Drawings T601 through T610 furnish and install typical and as noted all “3/4” Fire Resistant Plywood.”
- 11) The General Trades, Electrical, Communications, Fire Alarm and Security Subcontractors should carefully review Drawing AV 000 especially “Audio Visual and Related Work Responsibly Schedule” to be sure that have included all of the labor, material and equipment included in their base bid as it relates to the assignment of the work in that matrix.
- 12) Furnish and install all fire stopping, smoke seals and fire safing throughout the project. Include all work at top of wall and horizontal and vertical MEP penetrations.
- 13) This Subcontractor shall carefully review drawings A0.03, A0.04 and A0.05. This subcontractor must base his or her bid on providing Fire Stopping and Smoke Sealing that meets or exceeds the ratings that are depicted on the drawings. This subcontractor shall provide all supportive information such as UL Design Criteria as part of the shop drawing submission to justify the selection of material and the installation process of the materials.
- 14) Referring to Details 3 and 5 on Drawing A6.01 provide typical and as noted “Firestop at Floor Line, Typ.” This Subcontractor’s work will also include Firestopping at the roofs, also.
- 15) Referring to Detail 3 on Drawing A6.02 provide typical and as noted “Firestop at Floor Line, Typ.” This Subcontractor’s work will also include Firestopping at the roofs, also.
- 16) Referring to Detail 3 on Drawing A6.03 provide typical and as noted “Firestop at Floor Line, Typ.”
- 17) Referring to Detail 1 on Drawing A6.13 provide typical and as noted “Fire Safing and Smoke Seal.”
- 18) Referring to Detail 1 on Drawing A6.30 provide typical and as noted “Fire Safing and Smoke Seal.”
- 19) Referring to Detail 5 on Drawing A6.30 provide typical and as noted “Fire Sealant at Floor Slab.”
- 20) Referring to Detail 1 and 5 on Drawing A6.31 provide typical and as noted “Smoke Seal and Firestopping.”
- 21) Referring to Detail 1 on Drawing A6.32 furnish and install typical and as noted “Smoke Seal and Firestopping.”
- 22) Referring to all of the Details on Drawing A7.50 this subcontractor shall provide all smoke sealing and/or fire stopping that is required to meet or exceed the ratings that are indicated on the Contract Documents. This shall apply to both top of wall conditions, but also at all other wall penetrations.

- 23) Referring to Detail 1 on Drawing A8.07 provide typical and as noted “Firestopping and Sealant Around Duct Penetrations Where Required.”
- 24) Referring to Detail 1 on Drawing A8.07 provide typical and as noted “Firestopping Around Penetrations, Typ.”
- 25) Referring to Detail 1 on Drawing provide and comply with typical and as noted “Provide 2 Hour Rated Per Test No. WHI-39 PSH 0154/0167 USG SA-929 P.8.”
- 26) Referring to Detail 2 on Drawing A8.07 provide typical and as noted “Firestopping.”
- 27) Referring to Detail 2 on Drawing A8.07 provide typical and as noted “Firesafe All Open Flutes.’
- 28) Typically, but not always, the MEPS Subcontractors will install sleeves in the walls, floors, ceilings and roofs in advance of placing their conduit, pipe, ductwork through said sleeves. It shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the outer edge of said sleeve. In addition, it shall be the responsibility of the General Trades Subcontractor to properly seal between the walls, floors, ceilings and roofs to the inner edge of said sleeve up to and against the item(s) that are passing through the sleeve(s).
- 29) Provide all Fire Stopping and Smoke Sealing for the all partitions including but not limited to Masonry, Drywall Curtainwall, Glass Wall, Storefront, etc.
- 30) Provide all Fire Stopping and Smoke Sealing for all penetrations through walls, floors, ceilings and the roofs that created by the Mechanical, Plumbing, Electrical, Security System, Fire Alarm, Communications, and Fire Protection Sub-contractors and their Sub-subcontractors.
- 31) The General Trades Subcontractor must include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents. In addition, this Subcontractor shall include a \$10,000 allowance for additional Fire Stopping and Smoke Sealing that is **not** defined, described, inferred or discernable within the Contract Documents.
- 32) In reference to Drawings T601 through T610 provide all fire stopping and smoke sealing as may be required at all conduit penetrations.
- 33) In reference to Detail 1 on Drawing T702 comply with “Fire and Smoke Proofing General Notes.”
- 34) In reference to Detail 1 on Drawing T702 provide typical and as noted “fire stop sealant (both sides).”
- 35) In reference to Detail 1 on Drawing T702 provide typical and as noted “fire stop sealant and mineral wool packing.”

EXCLUSIONS

- 1) Sale and Use Taxes.

UNIT PRICES

Indicated below, the following unit price's shall be used in calculating Hazardous containing materials for additions and deductions from the original contract amount. These prices shall reflect all work practices required to remove and dispose the material in accordance with the project specifications and State and Federal regulations:

Bids shall include the following Unit-cost's:

ALLOWANCES

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision (non-working foreman), overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

Bids shall include the following Lump Sum Allowances:

ALLOWANCE NO. 1:

Minor Work Provisions: \$10,000.

The General Trades Contractor shall include in their Base Bid all work that is defined, described, inferred and/or discernable within the Contract Documents as it relates to the Fire Stopping and Smoke Sealing. **However, in addition, this Subcontractor shall include a \$10,000 allowance for additional Fire Stopping and Smoke Sealing that is not defined, described, inferred or discernable within the Contract Documents. This additional minor work that is not indicated on the Contract Documents shall be performed as directed by the Construction Manager and shall be in addition to all other work indicated in this scope.**

EXHIBIT “B”
SCOPE OF WORK
New Engineering & Science Building
UCONN Storrs Campus
Storrs, CT
UCONN Project No. 901376

Bid Package No.22.0 Plumbing

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Plumbing & HVAC** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Plumbing & HVAC** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE #22.0 – Plumbing & HVAC:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Plumbing & HVAC** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: Bid Documents **Volume 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Volume 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015

Entitled: Bid Documents **Appendix 1** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON GEOTECHNICAL ENGINEERING ASESMENT AND
PRELIMINARY ENVIRONMENTAL PRECHARACTERIZATION PROGRAM –
AUGUST, 2014 ADDITIONAL SUBSURFACE EXPLORATIONS AND
GEOTECHNICAL ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Entitled: Bid Documents **Appendix 2** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Mitchell Giurgola Architects, LLP. 630 Ninth Avenue New York, NY 10036 Dated February 20, 2015.
REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM
PROPOSED SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014

Entitled: Bid Documents **Volume 00** Project # 901376 University of Connecticut New Engineering and Science Building Prepared by: Fusco Corporation 555 Long Wharf Drive New Haven, CT 06511 Dated February 20, 2015

Schedule of Drawings: See drawing list included in Manual 00

DIVISION 1 - GENERAL REQUIREMENTS

SECTION

01-1000	Summary
01-2200	Unit Prices
01-2300	Alternates
01-2500	Substitution Procedures
01-2600	Contract Modification Procedures
01-3100	Project Management and Coordination
01-3200	Construction Progress Documentation
01-3233	Photographic Documentation
01-3300	Submittal Procedures
01-4000	Quality Requirements
01-5000	Temporary Facilities and Controls
01-5639	Temporary Tree and Plant Protection
01-5719	Temporary Environmental controls
01-6000	Product Requirements
01-6100	University Product Standard
01-7300	Execution
017419	Construction Demolition Waste Management
01-7700	Closeout Procedures
01-7823	Operation and Maintenance Data
01-7839	Project Record Documents
01-7900	Demonstration and Training

018113	VOC Limits for Adhesives, Sealants, Paints and Coatings
018119	Construction Indoor Air Quality
019113	Building Commissioning Requirements

DIVISION 7 - THERMAL AND MOISTURE PROTECTION SECTION

079200	Joint Sealers
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DIVISION 8 - OPENINGS SECTION

083113	Access Doors
089000	Louvers and Vents

DIVISION 11 - EQUIPMENT SECTION

116100	High Performance Laboratory Fume Hoods
116200	Laboratory Equipment

DIVISION 13 - SPECIAL CONSTRUCTION SECTION

131146	Tank Filtration Equipment
132100	Laboratory Environmental Rooms(as Applicable)
133413	Fiberglass Tank Construction

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DIVISION 22 - PLUMBING

220500	BASIC PLUMBING MATERIALS AND METHODS
220510	UNDERGROUND PLUMBING
220529	HANGERS AND SUPPORTS
220548	PLUMBING VIBRATION CONTROLS AND SEISMIC RESTRAINTS
220553	PLUMBING IDENTIFICATION
220584	THROUGH-PENETRATION FIRESTOP SYSTEMS
221110	PLUMBING VALVES
221120	PLUMBING DISTRIBUTION PIPING
221130	DRAINAGE AND VENT PIPING
221140	PLUMBING SPECIALTIES
223000	PLUMBING EQUIPMENT
224000	PLUMBING FIXTURES
226000	LABORATORY PLUMBING SYSTEMS

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING (As

Applicable)

230510 3D BUILDING INFORMATION MODELING

DIVISION25 – INTERGRATED AUTOMATION (As Applicable)

DIVISION 26 – ELECTRICAL (As Applicable)

APPENDICES

Appendix 1

REPORT ON GEOTECHNICAL ENGINEERING ASESMENT AND PRELIMINARY
ENVIRONMENTAL PRECHARACTERIZATION PROGRAM – AUGUST, 2014
ADDITIONAL SUBSURFACE EXPLORATIONS AND GEOTECHNICAL
ENGINEERING CONSIDERATIONS – 19 DECEMBER, 2014

Appendix 2

REPORT ON ENVIRONMENTAL PRECHARACTERIZATION PROGRAM PROPOSED
SCIENCE AND ENGINEERING BUILDING – DECEMBER, 2014
REVISED FEBRUARY 2015

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Service from five feet outside building into the building unless otherwise noted in the Clarifications Section of this Scope of Work; Plumbing, Supply Connections to equipment of other trades and/or furnished by Owner; Connections to Lab Equipment and components Fume Hoods (including all service connections); Access Doors, Booster Pumps, Starters and Disconnects; Hangers, Anchors, Pipe supports: Cleaning, Lubrication, Coordination Drawings; Record Drawings; Operating and Maintenance Manuals; Instructions; Tests on: all system under your Scope of Work; Commissioning; Coordination with project schedule and other trades; Submittals, Samples, Product Data and etc.

All Plumbing Work; Sanitary Piping Systems; Venting Systems; Waste Systems; Domestic Water Piping; Piping Systems; Storm Piping Systems; Trap Primers and Cleanouts; Water Hammer Arrestors; Plumbing Fixtures ; Plumbing Equipment; Domestic Water Heater Equipment and Accessories; Gas Service and piping; Vibration Isolation; Insulation; Pipe and Pipe fittings; Motors and Starters for applicable equipment; Storm and Roof Drainage Systems; Temporary Roof Drains; Domestic Hot and Cold Water Systems; Water Service; Connections and Support systems for Equipment furnished by others; Gas Connections to Equipment and Lab Casework, Hangers and Supports; Insulation; Valves; Pipes; Drains; Water Heating Equipment; Vibration Control; Pumps and Controls; Hose Bibbs and Wall Hydrants; Miscellaneous Plumbing Specialties; Coordination Drawings; Core Boring; Floor and Through Wall

Sleeves' Down Spout Nozzles; and Joint Sealants for your scope of work; non plumbing Mechanical Connections to Equipment provided by others. Mock-ups; Submittals; Product Data and Samples and Etc; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing and Commissioning

The Plumbing Contractor shall provide starters and disconnects for pumps; motors; equipment and etc.; provided under your scope of work; unless specifically noted to be furnished by others. Interconnecting wiring (including controls) shall be the responsibility of the Plumbing Contractor, as noted on the Contract Documents.

3) Seismic Bracing:

- a. This Subcontractor shall furnish and install all seismic bracing as required and indicated in the Contract Documents including state of CT PE stamped calculations.
- b. This Subcontractor shall furnish and install all flexible joint assemblies associated with any mechanical restraint collars as indicated in the Contract Documents.

4) Underground Ducts and Utilities

The Site Contractor and/or Utility Company shall provide water, storm and sanitary service from point of origin to within 5' of the building line. The Site Contractor shall also provide Trenching, Bedding, Backfilling, Concrete Anchors, Thrust Blocks and Encasement as required for your work and the work of other trades.

The Plumbing Contractor shall be responsible for connections to each service within your Scope of Work provided by the Site Contractor and/or Utility Co. to complete the installation. Inserts, sleeve and the like required to enter/penetrate Foundation Wall and/or slabs shall be provided and sealed/Waterproofed by the Plumbing Contractor

5) Service Connections:

The Plumbing Contractor shall be responsible for all final connections, including, shut off valves, disconnects and etc. for all Equipment, (furnished by others) as it relates to your scope of work, including but not limited to: Millwork and Casework Services, Kitchen Equipment, Owner Supplied Equipment, and etc.

The Plumbing Contractor shall coordinate with the appropriated Contractor to assure that all services are complete in all respects. Failure to notify the Construction Manager of any discrepancies shall be construed as acceptance of the connection locations.

6) Wall-Hung Lavatories and Toilets:

The Plumbing and HVAC Contractor shall coordinate with the Masonry and General Trades Contractor for installation of any wall anchors required during masonry or drywall wall construction for support of wall-hung lavatory systems and toilets. The Plumbing and HVAC Contractor will be responsible for furnishing and installing all necessary wall anchors or carries in strict accordance with the manufacturer's specification for their wall-hung lavatory systems.

7) Casework:

The Millwork Contractor shall coordinate and be responsible for all locations of rough-ins for the Casework. The Millwork Contractor shall submit detailed shop drawings within 45 days of award that include a detailed point to point location of all MEP rough-ins. These shop drawings shall be accompanied with a digital copy in AutoCAD and shall be used for all Contractor coordination. These drawings will be used by the Plumbing and HVAC and Electrical Contractors to locate penetrations/sleeves that will be core bored by them (Plumbing and HVAC and Electrical Contractors) for this work. All cost associated with core boring shall be included in this bid proposal.

The Plumbing Contractor shall furnish and set all faucets and sinks and make all appropriate final connections to these items.

8) Temporary Roof Drain Systems, Pans, Metal Deck openings

The Plumbing and HVAC Contractor shall provide temporary roof drains SYSTEM for the proposed roof drains.

The Plumbing and HVAC Contractor shall provide temporarily running and maintaining the roof drains/roof leaders to the exterior of the building to locations as directed by the Construction Manager.

The Plumbing and HVAC Contractor shall provide and be responsible for cutting holes in all roof drain pans and cutting and removal of metal decking for all of their openings.

9) Under Slab Plumbing

This Subcontractor shall complete ALL under slab plumbing three (3) days prior to the scheduled slab on grade pour time being of the essence.

This Subcontractor shall expedite material submittals for all underslab piping and accessories to complete this Work.

This Subcontractor shall utilize sufficient manpower to complete this Work.

10) Heat Trace:

The Plumbing Contractor will furnish and install all electric heat trace cable systems as indicated on the Contract Documents for your work and the Electrical Contractor will provide all of the power wiring to these heating cables.

11) Gas Connections and Pressure Regulators:

The Plumbing Contractor shall install *all* interior and exterior gas piping and shall be responsible for the gas pressure required for all equipment. The Plumbing Contractor shall also be responsible for furnishing and installing all gas pressure regulators, shut off valves whether or not shown on

the Contract Documents required for correct operation of all equipment, meet code and to be coordinated and compliant with the gas company.

12) Access Doors:

The HVAC Contractor shall provide access doors to the General Trades Contractor for installation. The access door provided shall be of compatible use for the finish assemble. Sizing shall be suitable to meet required access code.

13) BIM Modeling Coordination Drawings:

This Subcontractor shall participate and provide BIM Coordination files to the **Gate Keeper (HVAC Contractor)** and participate in weekly coordination meetings.

CLARIFICATIONS

1. This Bidder may elect to submit a Bid Proposal combining Bid Packages 22.0 and 23.0 if the amount of the Bid Proposal offers a cost reduction. This combined Bid Packages "Offer" will be valid only if the Bidder submits an individual offer for each package involved. Bidders may offer this combined package proposal by submitting it on his or her business letterhead, as an added page to each Bid Form.

EXCLUSIONS

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price Allowances as listed below. Allowances shall include all necessary material, cost for delivery, installation, machinery, insurance, and applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.



UNIVERSITY OF CONNECTICUT – STORRS, CONNECTICUT
 PROPOSED UCONN ENGINEERING AND SCIENCE BUILDING
 TEMPORARY SOIL NAIL WALL SUPPORT OF EXCAVATION

DRAWING INDEX:

<u>SHEET NO.</u>	<u>DRAWING NO.</u>	<u>DRAWING TITLE</u>
SHEET 1	SN-1	COVER SHEET
SHEET 2	SN-2	GENERAL AND CONSTRUCTION NOTES
SHEET 3	SN-3	SOIL NAIL WALL PLAN
SHEET 4	SN-4	SOIL NAIL WALL ELEVATIONS
SHEET 5	SN-5	SECTIONS AND NAIL DETAILS
SHEET 6	SN-6	TYPICAL SECTIONS AND DETAILS
SHEET 7	SN-7	TYPICAL SECTIONS AND DETAILS

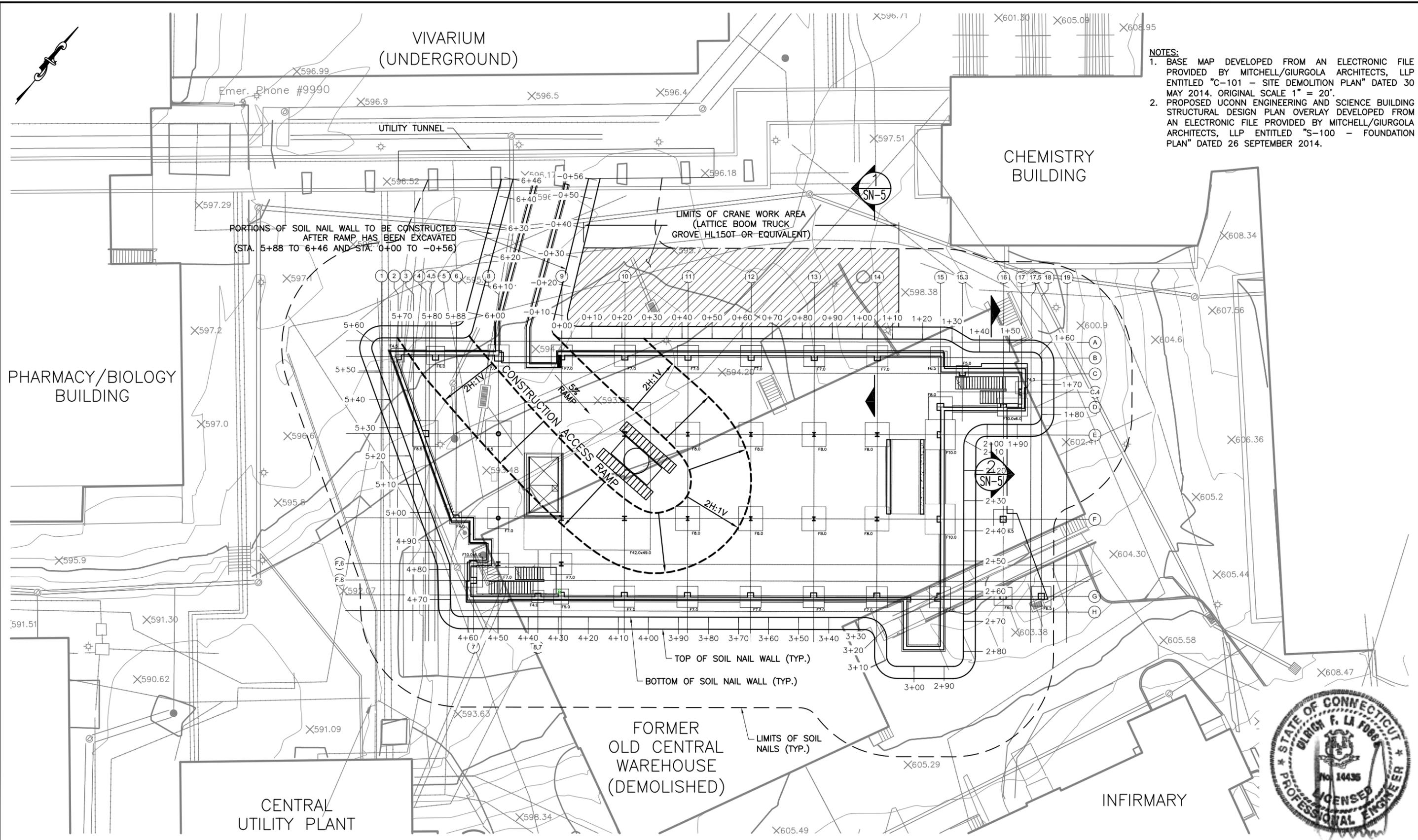


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CHECKED BY DFL					
APPROVED BY ULF					
	NO.	DATE	DRWN	CHKD	APPVD
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PROJECT UCONN ENGINEERING AND SCIENCE BUILDING TEMPORARY SOIL NAIL WALL SUPPORT OF EXCAVATION	PROJECT NO. 3631-002.00
DWG. TITLE COVER SHEET	SCALE NONE
	DATE 1/7/2015
	DRAWING NO. SN-1
	SHEET 1 OF 7



- NOTES:**
1. BASE MAP DEVELOPED FROM AN ELECTRONIC FILE PROVIDED BY MITCHELL/GIURGOLA ARCHITECTS, LLP ENTITLED "C-101 - SITE DEMOLITION PLAN" DATED 30 MAY 2014. ORIGINAL SCALE 1" = 20'.
 2. PROPOSED UCONN ENGINEERING AND SCIENCE BUILDING STRUCTURAL DESIGN PLAN OVERLAY DEVELOPED FROM AN ELECTRONIC FILE PROVIDED BY MITCHELL/GIURGOLA ARCHITECTS, LLP ENTITLED "S-100 - FOUNDATION PLAN" DATED 26 SEPTEMBER 2014.

PORTIONS OF SOIL NAIL WALL TO BE CONSTRUCTED AFTER RAMP HAS BEEN EXCAVATED (STA. 5+88 TO 6+46 AND STA. 0+00 TO -0+56)

LIMITS OF CRANE WORK AREA (LATTICE BOOM TRUCK GROVE HL150T OR EQUIVALENT)

CONSTRUCTION ACCESS RAMP

TOP OF SOIL NAIL WALL (TYP.)
BOTTOM OF SOIL NAIL WALL (TYP.)

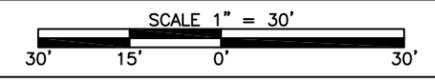
FORMER OLD CENTRAL WAREHOUSE (DEMOLISHED)

LIMITS OF SOIL NAILS (TYP.)

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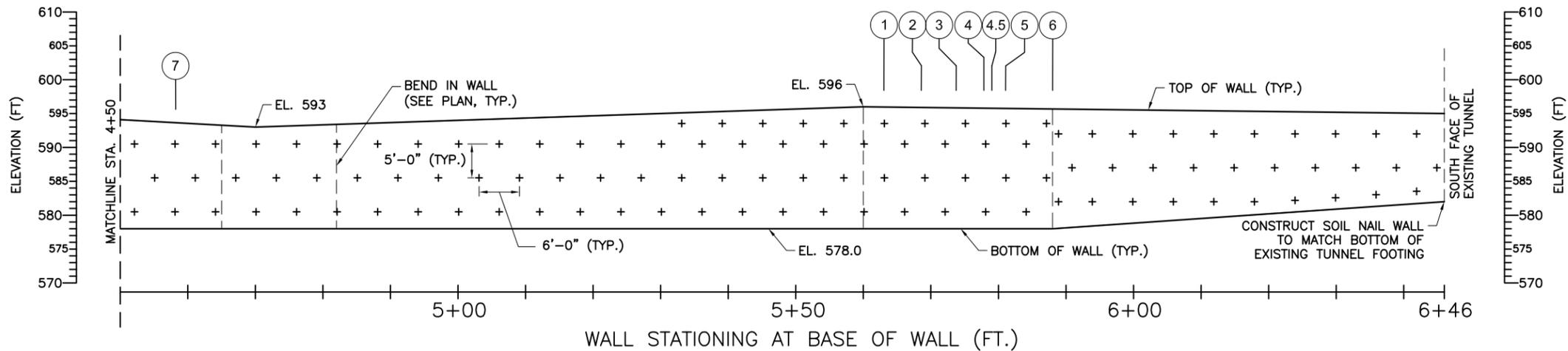
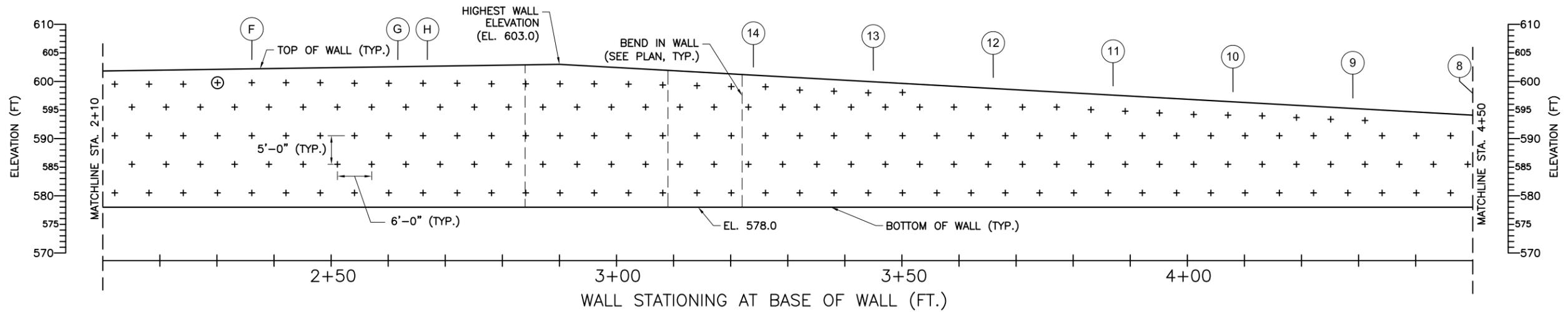
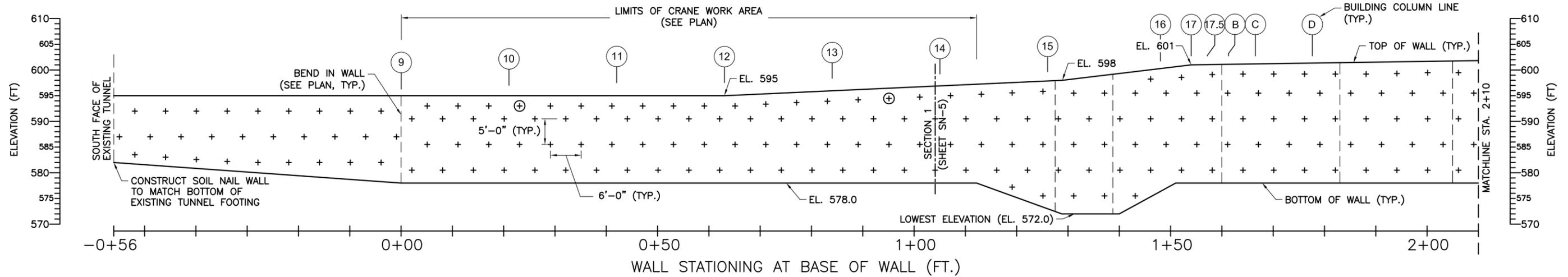
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PROJECT
UCONN ENGINEERING AND SCIENCE BUILDING
TEMPORARY SOIL NAIL WALL
SUPPORT OF EXCAVATION

DWG. TITLE
**SOIL NAIL WALL
PLAN**

PROJECT NO.	3631-002.00
SCALE	DATE
1" = 30'	1/7/2015
DRAWING NO.	SN-3
SHEET	3 OF 7



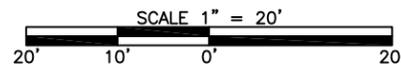
LEGEND:

- + SOIL NAIL
- ⊕ VERIFICATION TEST NAIL



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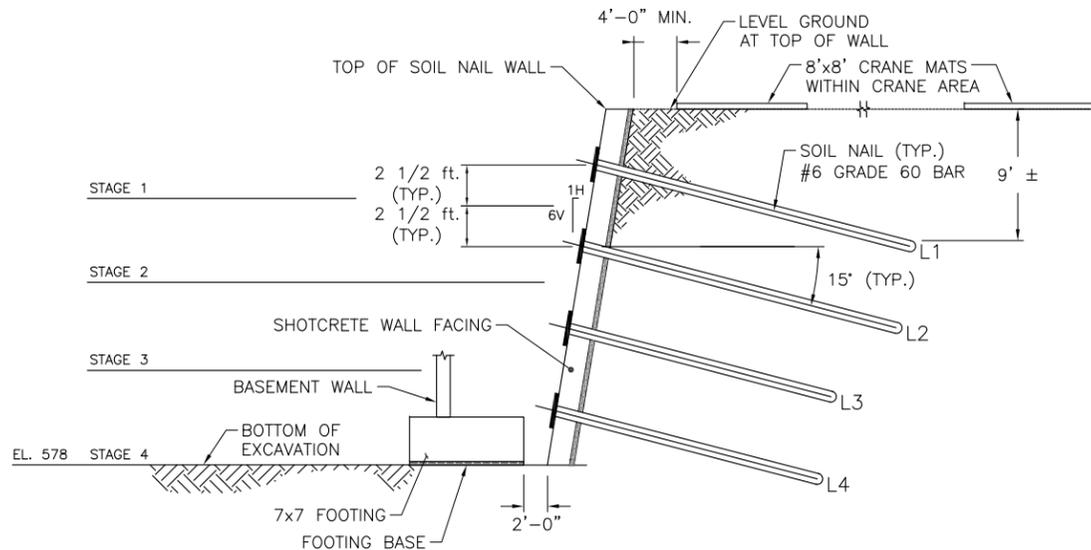
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PROJECT
**UConn ENGINEERING AND SCIENCE BUILDING
TEMPORARY SOIL NAIL WALL
SUPPORT OF EXCAVATION**

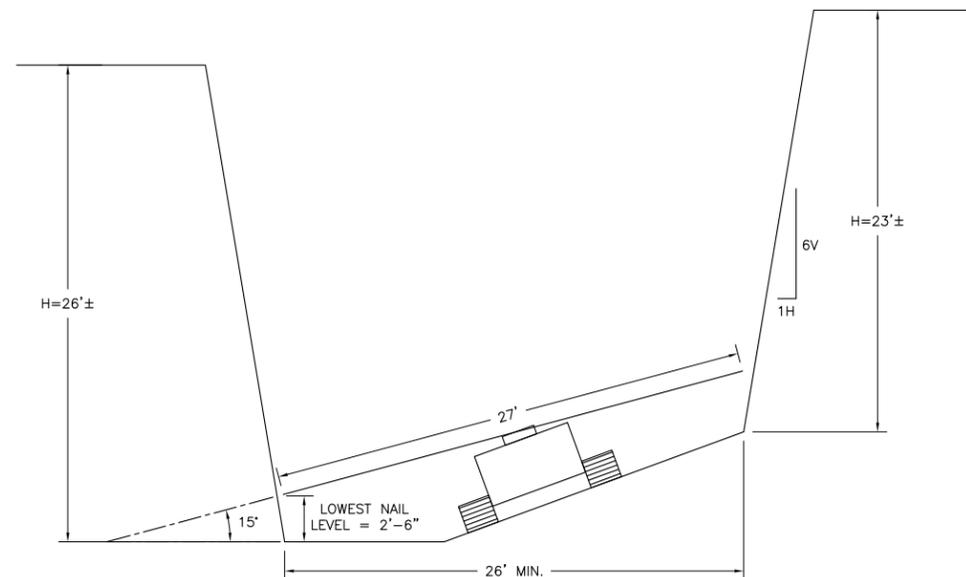
DWG. TITLE
**SOIL NAIL WALL
ELEVATIONS**

PROJECT NO.	3631-002.00
SCALE	DATE
1" = 20'	1/7/2015
DRAWING NO.	SN-4
SHEET	4 OF 7

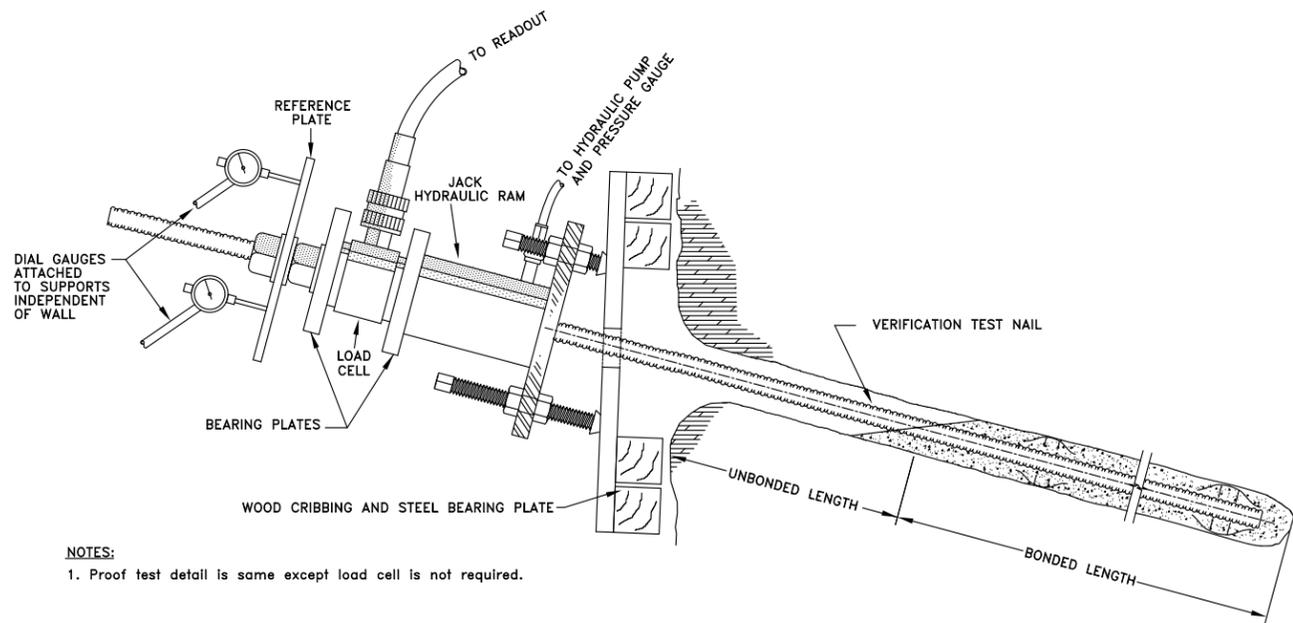


1 SECTION (AND SEQUENCE)
SN-3
NOT TO SCALE

SCHEDULE OF SOIL NAIL LENGTHS (in Ft.)			
SOIL NAIL LEVEL	NUMBER OF SOIL NAIL LEVELS		
	3	4	5
L1	27	27	27
L2	27	27	27
L3	23	23	27
L4	-	23	23
L5	-	-	23

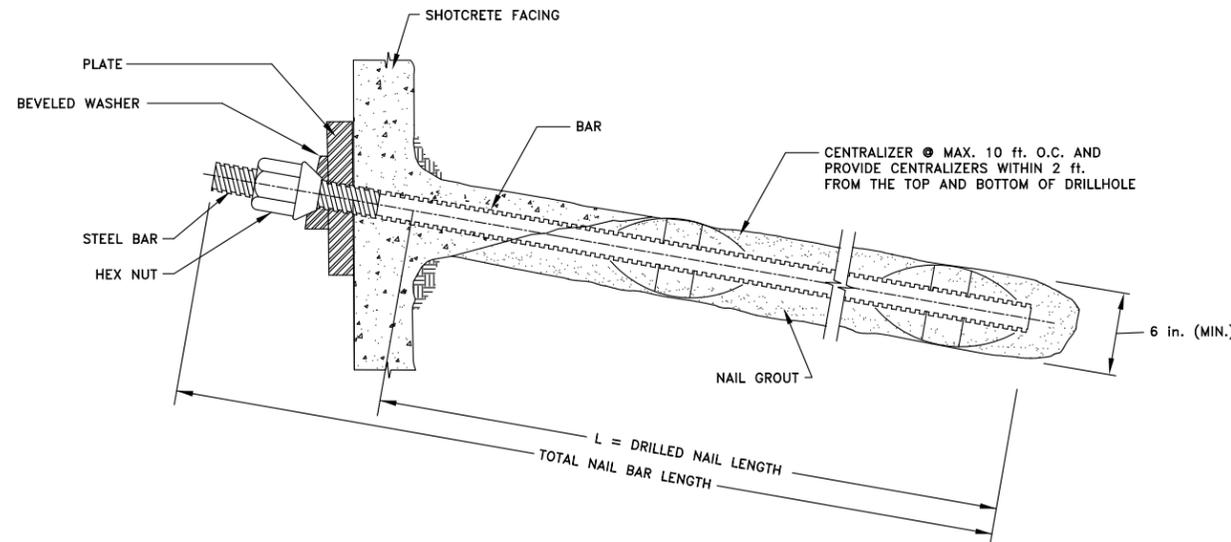


2 SECTION (SCHEMATIC)
SN-3
NOT TO SCALE



NOTES:
1. Proof test detail is same except load cell is not required.

3 VERIFICATION TEST SOIL NAIL DETAIL
NOT TO SCALE



4 SOIL NAIL DETAIL
NOT TO SCALE

MINOR SCALE - in IMP, JPG & PDF format/VAULT PC with 3dspin

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PROJECT
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TEMPORARY SOIL NAIL WALL
SUPPORT OF EXCAVATION

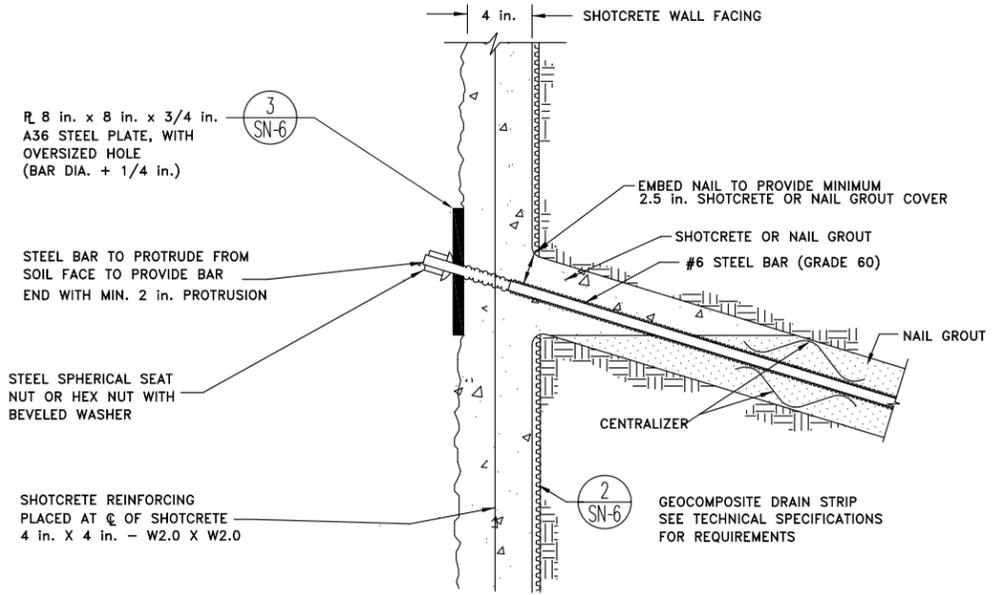
DWG. TITLE
**SECTIONS AND
TYPICAL NAIL DETAILS**

PROJECT NO.
3631-002.00

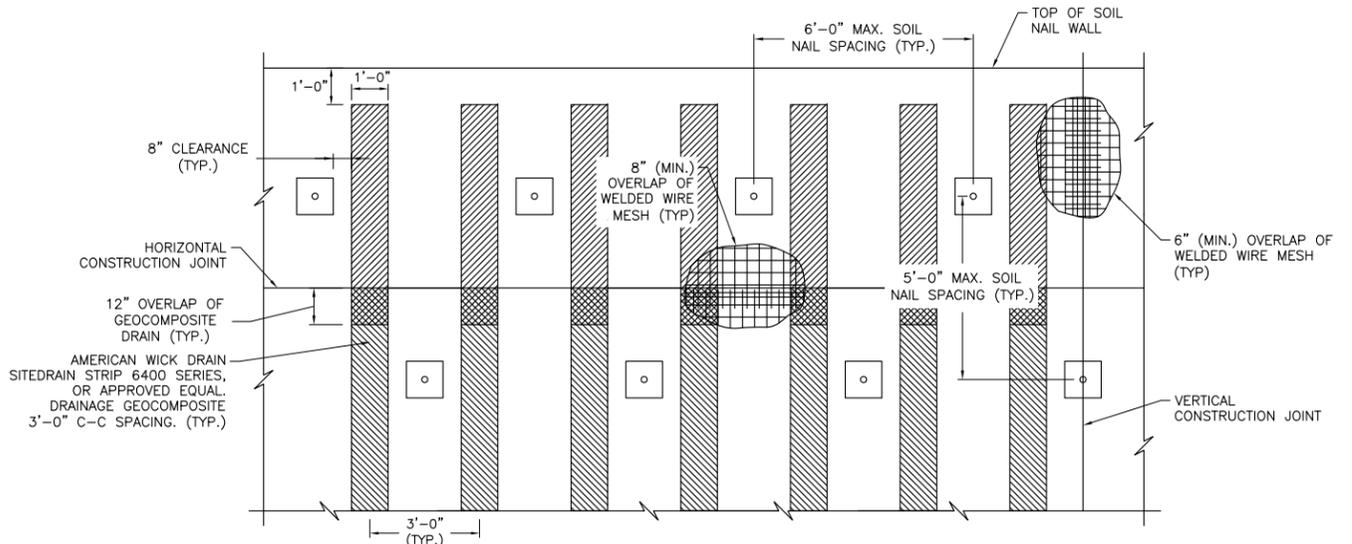
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AS NOTED 1/7/2015

DRAWING NO.
SN-5

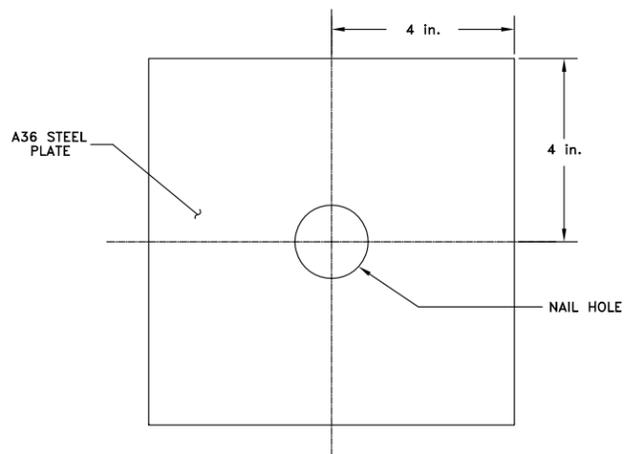
SHEET 5 OF 7



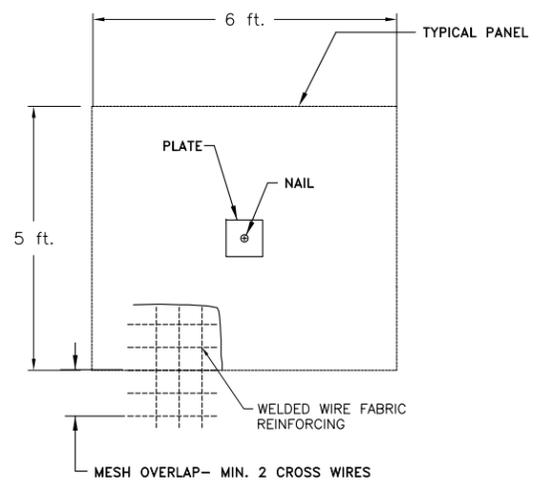
1 FINISHED WALL SECTION
NOT TO SCALE



2 TYPICAL GEOCOMPOSITE DRAINAGE AND MESH OVERLAP DETAILS
NOT TO SCALE



3 CONNECTOR PLATE DETAIL
NOT TO SCALE



4 TYPICAL SHOTCRETE PANEL REINFORCEMENT
NOT TO SCALE



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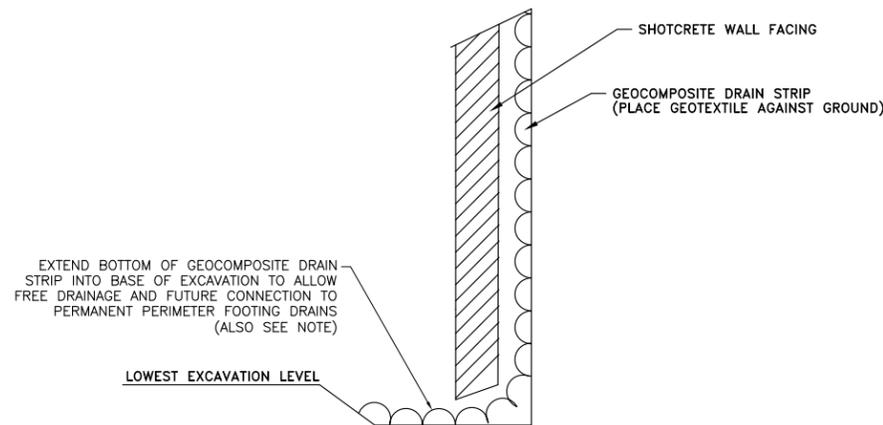
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PROJECT
UConn ENGINEERING AND SCIENCE BUILDING
TEMPORARY SOIL NAIL WALL
SUPPORT OF EXCAVATION

DWG. TITLE
TYPICAL SECTIONS AND DETAILS

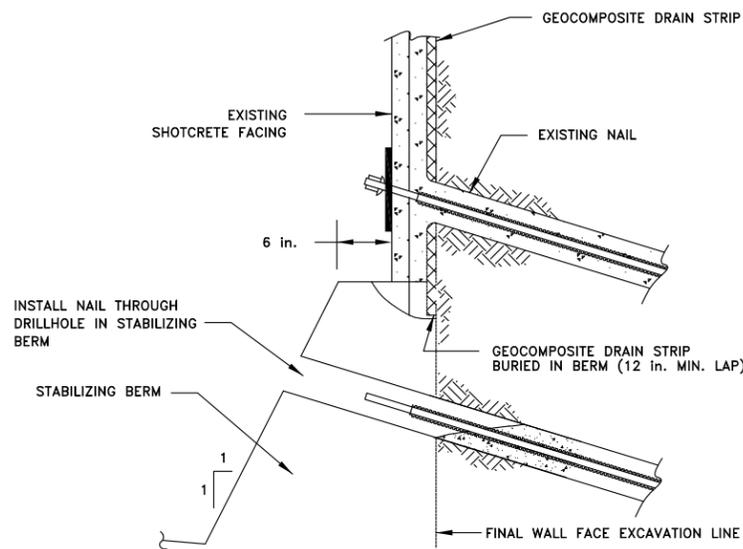
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SCALE	DATE
AS NOTED	1/7/2015
DRAWING NO.	SN-6
SHEET	6 OF 7

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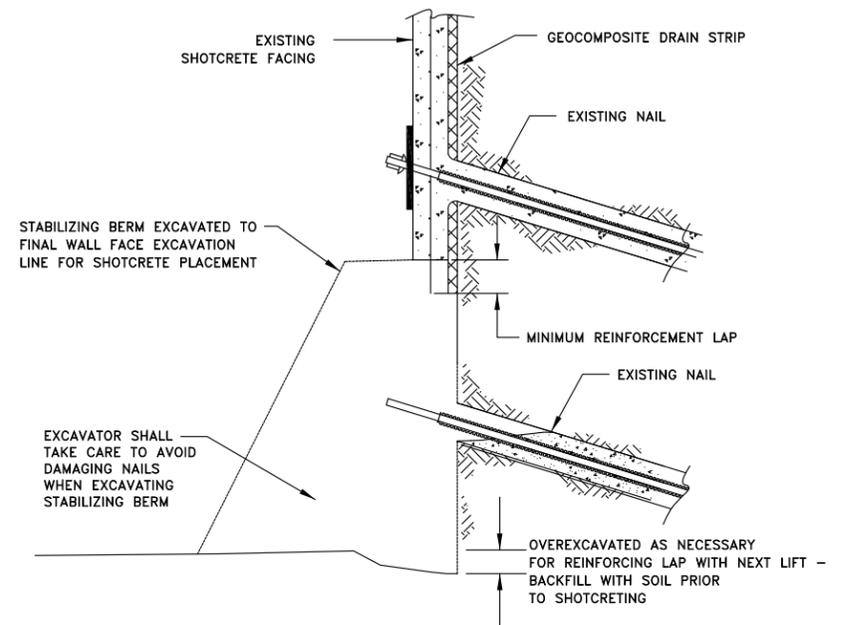


1 TYPICAL WALL DRAINAGE AT BASE
NOT TO SCALE

NOTE: CONTRACTOR SHALL PROTECT GEOCOMPOSITE DRAINAGE STRIP UNTIL IT HAS BEEN CONNECTED TO THE FOOTING DRAIN AND BACKFILLED.



2 NAIL INSTALLATION THROUGH TEMPORARY STABILIZING BERM (CONTRACTOR OPTION)
NOT TO SCALE



3 EXCAVATION OF TEMPORARY STABILIZING BERM FOR SHOTCRETE PLACEMENT (CONTRACTOR OPTION)
NOT TO SCALE



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DWG. TITLE
**TYPICAL
SECTIONS AND DETAILS**

PROJECT NO.	3631-002.00
SCALE	DATE
AS NOTED	1/7/2015
DRAWING NO.	SN-7
SHEET	7 OF 7